	Application No.	Applicant(s)
Notice of Allowability	10/657,648	SCHEPP ET AL.
	Examiner	Art Unit	
	Sun J. Lin	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendments & Remarks filed on 05/02/2005.*

2. ☒ The allowed claim(s) is/are *27-53, renumbered (37 CFR 1.126).*

3. ☒ The drawings filed on *09/08/2003 and 05/02/2005* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Applicants' attorney Paula D. Heyman gave authorization for this examiner's amendment on June 9, 2005.   The application has been amended as follows:

Claim 27, line 3, before "network" delete —remote—.

Claim 35, line 7, before "design" insert —the—.

Claim 35, line 12, before "design" insert —the—.

Claim 42, line 10, before "photomask" insert —the—.

Reasons for Allowance

Applicant's submitted exhibits attached with *"Declaration"* filed on 05/02/2005 is sufficient to overcome the examiner's cited reference (*PhotoStore*) under 37 CFR 1.131.

Therefore, Claims 27 – 53 are allowed over the prior art of record. An examiner's statement of reasons for allowance is given in the following.

As to Claims 27 – 53, the prior art does not teach or fairly suggest the following subject matters:

- A computer network for generating instructions for use by photomask manufacturing equipment comprises *a computer accessible to a remote customer computer via a network connection to receive photomask specification data and design data and to store them in a database (i.e., same database), a command generator operable to generate fracturing instructions and control instructions based on the photomask specification data* and *a fracture engine that uses the fracturing instructions and the design data to generate fractured pattern data* in combination with other limitations as recited in independent **Claim 27**;

- A method for generating instructions for use by photomask manufacturing equipment comprises *providing a network connection between a computer and a remote customer computer to receive photomask specification data and design data and to store them in a database (i.e., same database), generating fracturing instructions and control instructions based on the photomask specification data using a command*

generator and *generating fractured pattern data from the fracturing instructions and the design data using a fracture engine* in combination with other limitations as recited in independent **Claim 35**;

- A method for automatically generating instruction for use by photomask manufacturing equipment comprises *receiving photomask specification data in an electronic format from a customer computer* and, in response to receiving the photomask specification data, *automatically performing operations to generate fracture instructions, to generate equipment instructions from the fracture instructions* and to *electronically transmit the equipment instructions to the photomask manufacturing equipment* in combination with other limitations as recited in independent **Claim 42**;

- A method for generating instruction for use by photomask manufacturing equipment comprises *receiving photomask specification data in an electronic format from a customer computer* and, in response to receiving the photomask specification data, *automatically generating a job deck for photomask writing tools* based on the photomask specification data in combination with other limitations as recited in independent **Claim 53**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sun J. Lin whose telephone number is (571) 272 – 1899. The examiner can normally be reached on Monday to Friday from 9:30am to 6:30pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Sun J. Lin
Patent Examiner
Art Unit 2825
June 9, 2005

Network-Based Photomask Data Entry Interface and
Instruction Generator for Manufacturing Photomasks
Inventors: X. Long Dai, et al.
Serial No. 10/661,187   Filing Date: 09/12/2003
Attorney Docket 068062.0166
REPLACEMENT Sheet 1.of 1

6/12

50

| Main Menu | Get a Quote/Account | Account | Mask Order | Info | Feedback |
| | | | | Help | Logout |

| Instructions | General | Layers | Patterns | Placements | Fractures | Business | Submit |

| TestCompany | View summary | In Progress |

Please complete the information for each distinct pattern, and press the "Save and Forward" button to progress to *Pattern Placement*.

If the number of patterns or layer information is wrong, please return to the General Info Screen and correct the number of distinct patterns, then return to this screen.

| ←─Save And Back | Save And Stay |

| Save And Forward ─→ |

Patterns 1 ─ 1 of 1
Layers 1 ─ 1 of 1

| Pattern #1 | Pattern Name: [▼] ⓘ | Fracture Required? [▼] ⓘ |

51

| Layer | Number of Placements | Address Units Out (μ) | Final CD Size(μ) | CD Tolerance (μ) | CD Digitized? | Digitized Data Tone |

1
Pattern application   [   ] [   ] [   ] +/−[   ] [▼] [▼]
                           ⓘ   ⓘ   ⓘ   ℘   ⓘ   ⓘ

| ←─Save And Back | Save And Stay |

| Save And Forward ─→ |

℘ =Optional for order   ⓘ =Required for submit, optional for this screen   ⓘ =Required for this screen

FIG. 5

Network-Based Photomask Data Entry Interface and
Instruction Generator for Manufacturing Photomasks
Inventors: X. Long Dai, et al.
Serial No. 10/661,187   Filing Date: 09/12/2003
Attorney Docket 068062.0166
ANNOTATED Sheet 1 of 1

6/12

(50) — Element 50 Added

| Main Menu | Get a Quote/Account | Account | Mask Order | Info | Feedback |
| | | | | Help | Logout |

| Instructions | General | Layers | Patterns | Placements | Fractures | Business | Submit |

| TestCompany | | View summary | | In Progress |

Please complete the information for each distinct pattern, and press the "Save and Forward" button to progress to *Pattern Placement*.

If the number of patterns or layer information is wrong, please return to the General Info Screen and correct the number of distinct patterns, then return to this screen.

| ◄— Save And Back | Save And Stay |

| Save And Forward —► |

Patterns 1 — 1 of 1
Layers 1 — 1 of 1

Pattern #1   Pattern Name: [▼] (!) Fracture Required? [▼] (!)

51 {

| Layer | Number of Placements | Address Units Out (μ) | Final CD Size(μ) | CD Tolerance (μ) | CD Digitized? | Digitized Data Tone |

Pattern application [ ] [ ] [ ] +/- [ ] [▼] [▼]

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"Patent" changed to "Pattern"

| ◄— Save And Back | Save And Stay |

| Save And Forward —► |

(?) =Optional for order   (!) =Required for submit, optional for this screen   (!) =Required for this screen

FIG. 5